

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



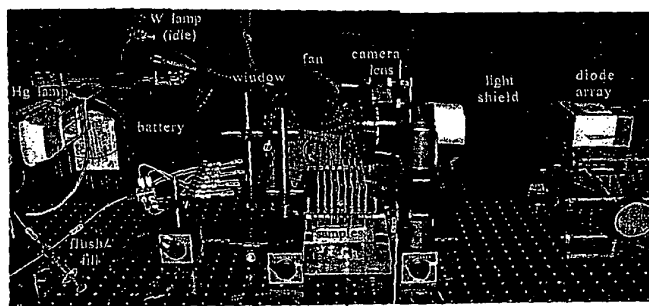
(43) International Publication Date  
15 March 2001 (15.03.2001)

PCT

(10) International Publication Number  
**WO 01/18528 A1**

- (51) International Patent Classification<sup>7</sup>: **G01N 21/25**, 27/447, 30/74
- (74) Agents: **LARCHER, Carol** et al.; Leydig, Voit & Mayer, LTD, Suite 4900, Two Prudential Plaza, 180 N. Stetson, Chicago, IL 60601-6780 (US).
- (21) International Application Number: PCT/US00/20447
- (22) International Filing Date: 28 July 2000 (28.07.2000)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 60/153,263 9 September 1999 (09.09.1999) US  
*09 Mar 02*
- (71) Applicant (for all designated States except US): **IOWA STATE UNIVERSITY RESEARCH FOUNDATION, INC.** [US/US]; 310 Lab of Mechanics, Ames, IA 50011-2131 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **YEUNG, Edward**, S/ [US/US]; 1005 Jarrett Circle, Ames, IA 50014 (US).  
**GONG, Xiaoyi** [CN/US]; 118F University Village, Ames, IA 50010 (US).
- Published:  
— With international search report.
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD OF ANALYZING MULTIPLE SAMPLES SIMULTANEOUSLY BY DETECTING ABSORPTION AND SYSTEMS FOR USE IN SUCH A METHOD



WO 01/18528 A1

(57) Abstract: The present invention provides a method of analyzing multiple samples simultaneously by absorption detection. The method comprises: (i) providing a planar array of multiple containers, each of which contains a sample comprising at least one absorbing species, (ii) irradiating the planar array of multiple containers with a light source and (iii) detecting absorption of light with a detection means that is in line with the light source at a distance of at least about 10 times a cross-sectional distance of a container in the planar array of multiple containers. The absorption of light by a sample indicates the presence of an absorbing species in it. The method can further comprise: (iv) measuring the amount of absorption of light detected in (iii) indicating the amount of the absorbing species in the sample. Also provided by the present invention is a system for use in the above method. The system comprises: (i) a light source comprising or consisting essentially of at least one wavelength of light, the absorption of which is to be detected, (ii) a planar array of multiple containers, and (iii) a detection means that is in line with the light source and is positioned in line with and parallel to the planar array of multiple containers at a distance of at least about 10 times a cross-sectional distance of a container.